DVI Audio Extender

EXT-DVI-AUDIO-CAT5
USER MANUAL

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Notice

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OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE DVI AUDIO EXTENDER

- The DVI Audio Extender is housed in a metal box for better RF shielding.
- Your CAT-5 cable should not exceed 300 feet for 1280x1024/1080i.
- Your CAT-5 cable should not exceed 150 feet for 1920x1080/1080p.
- If the source requires EDID present, you can use the Gefen DVI Detective to provide EDID information

* CAT6 cable is suitable for high resolutions at 50 meters.

INTRODUCTION

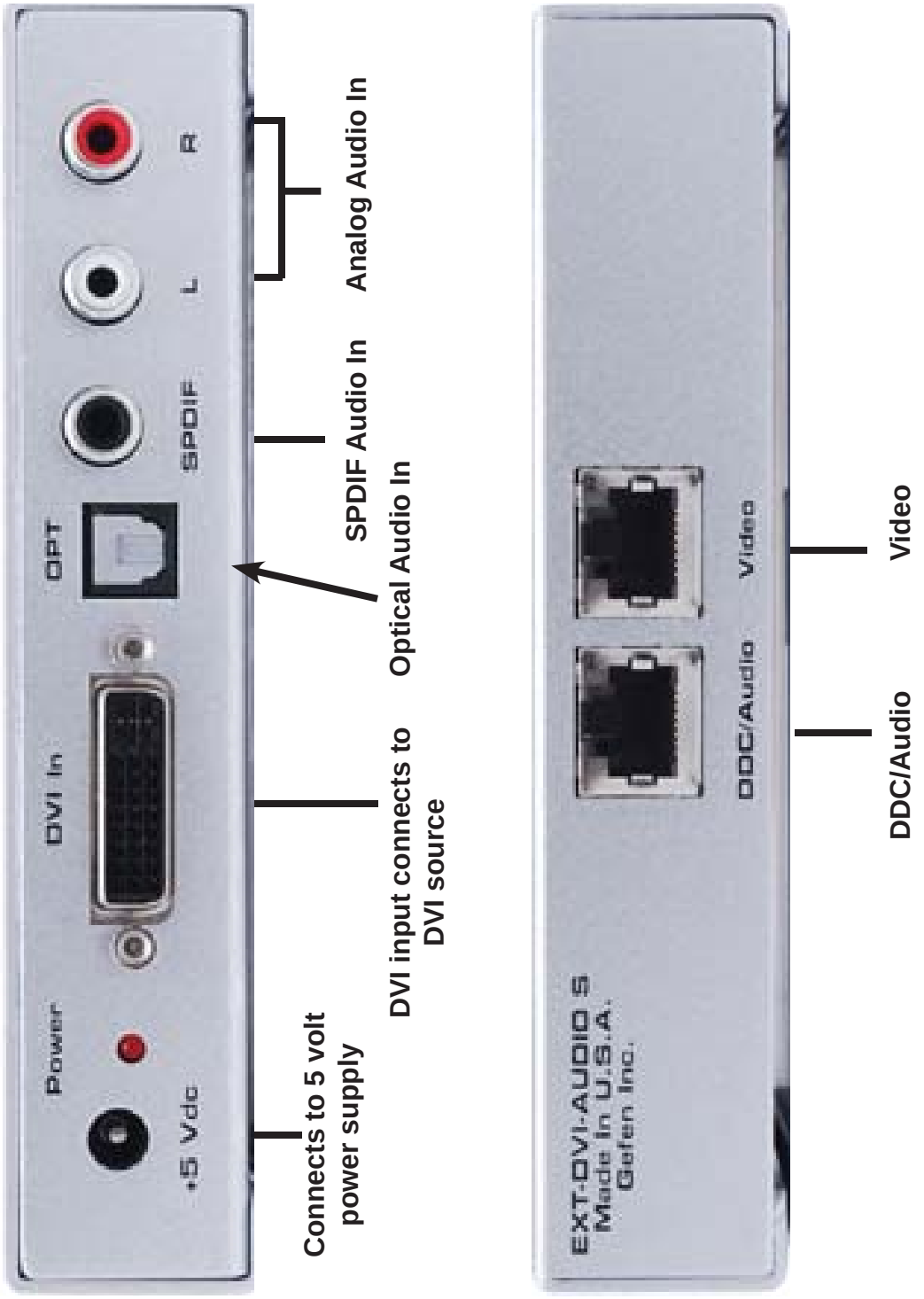
The DVI Audio Extender sender unit sits next to your computer, DVD player or any set-top box with a DVI output. The cable supplied with the DVI Audio Extender connects your DVI source to the send unit. The DVI Audio Extender receiver unit sits next to your DVI display - up to 200 feet at 1280x1024/1080i (150 feet at 1920x1200/1080p). The display plugs into the back of the DVI Audio Extender receiver unit. Two CAT-5 cables connect the DVI Audio Extender-S and the DVI Audio Extender-R units to each other.

CONTENTS

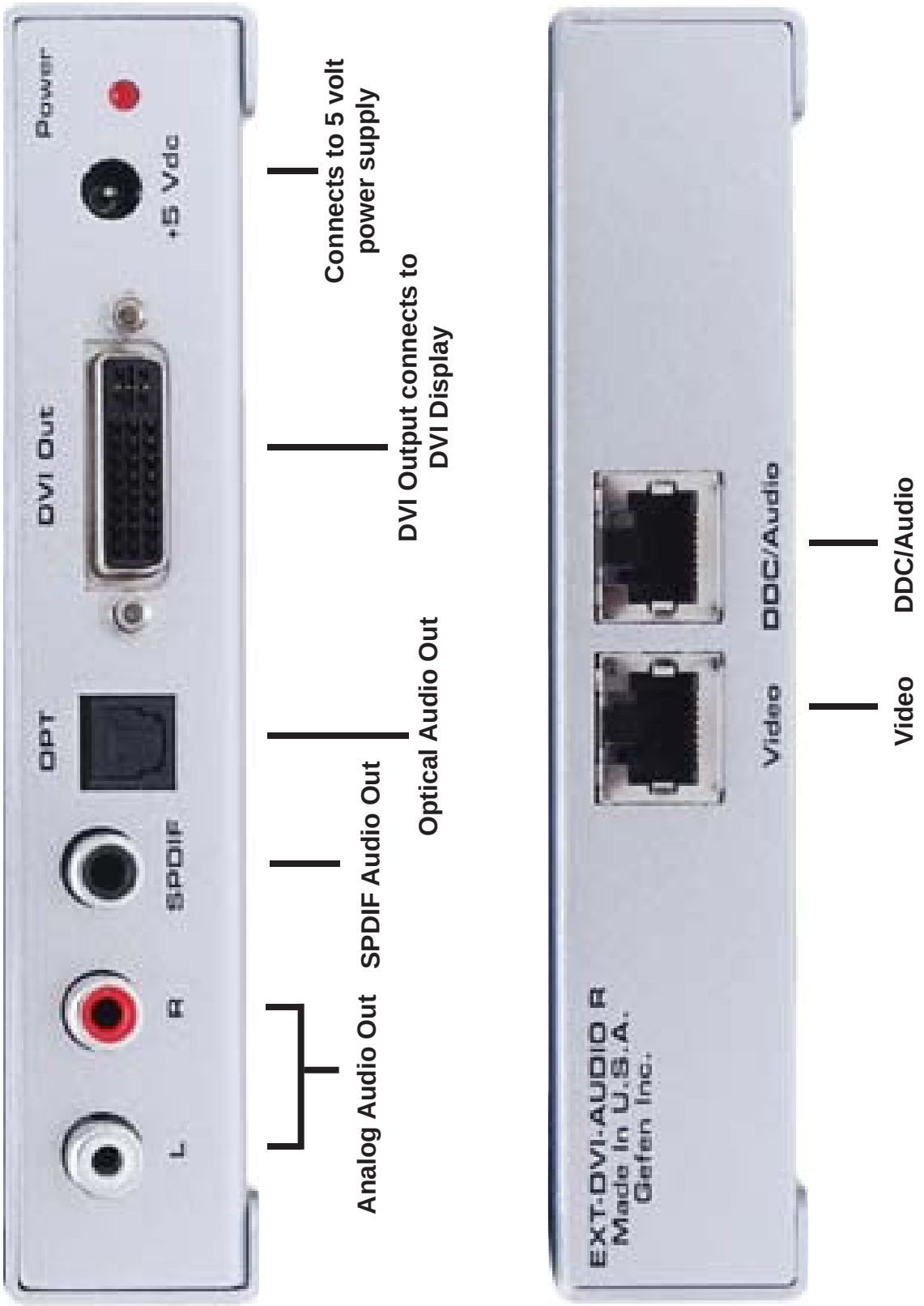
The DVI Audio Extender system consists of:

(1) DVI Audio Extender-S
(1) DVI Audio Extender-R
(1) 6 ft DVI to DVI Cable M-M
(2) 5V DC power supply
(1) 6 ft Audio RCA Cable

DVI AUDIO EXTENDER SENDER PANEL DESCRIPTION



DVI AUDIO EXTENDER RECEIVER PANEL DESCRIPTIONS



HOW TO CONNECT THE DVI AUDIO EXTENDER

1. Connect your source to the DVI Audio Extender sender unit using the included DVI Cable.

2. Connect the audio from your source to the DVI Audio Extender sender using the included analog RCA cables or optional digital audio cable.

3. Connect your display to the DVI Audio Extender receiver unit using a DVI Cable.

4. Connect the audio on your display or audio receiver to the DVI Audio Extender receiver unit using the analog RCA cables or optional digital audio cable.

5. Connect your CAT-5 cables between the sender and the receiver

6. Plug the 5V power supply into the DVI Audio Extender sender and receiver unit

7. You should now have picture and sound. If you do not see a picture, try unplugging and re-plugging the DVI input on the DVI sender unit. Make sure your CAT-5 cables are not crossed. Recycle the power on the unit.

   * If problems persist try adjusting the Dip Switches by following the Dip Switch Usage Guide.

SERVICE SWITCH USAGE GUIDE

The Sender and Receiver of the Gefen DVI Audio Extender both contain a set of service switches (also called dip switches) located underneath each unit. Peeling back the silver sticker will reveal the service switch bay. These service switches are used to boost and equalize the signal to best match the conditions in your setup. (*Note: Adjustments should be done with sources and display on. Switches 3 and 4 are not used.)

Sender Dip Switch Settings		
Setting	Switch 1	Switch 2
No Boost	OFF	ON
Normal Boost (Default)	OFF	OFF
Strong Boost	ON	OFF
Undefined	ON	ON

Receiver Dip Switch Settings		
Setting	Switch 1	Switch 2
No EQ (Default)	OFF	OFF
EQ Setting 2	ON	OFF
EQ Setting 3	OFF	ON
Maximum EQ	ON	ON

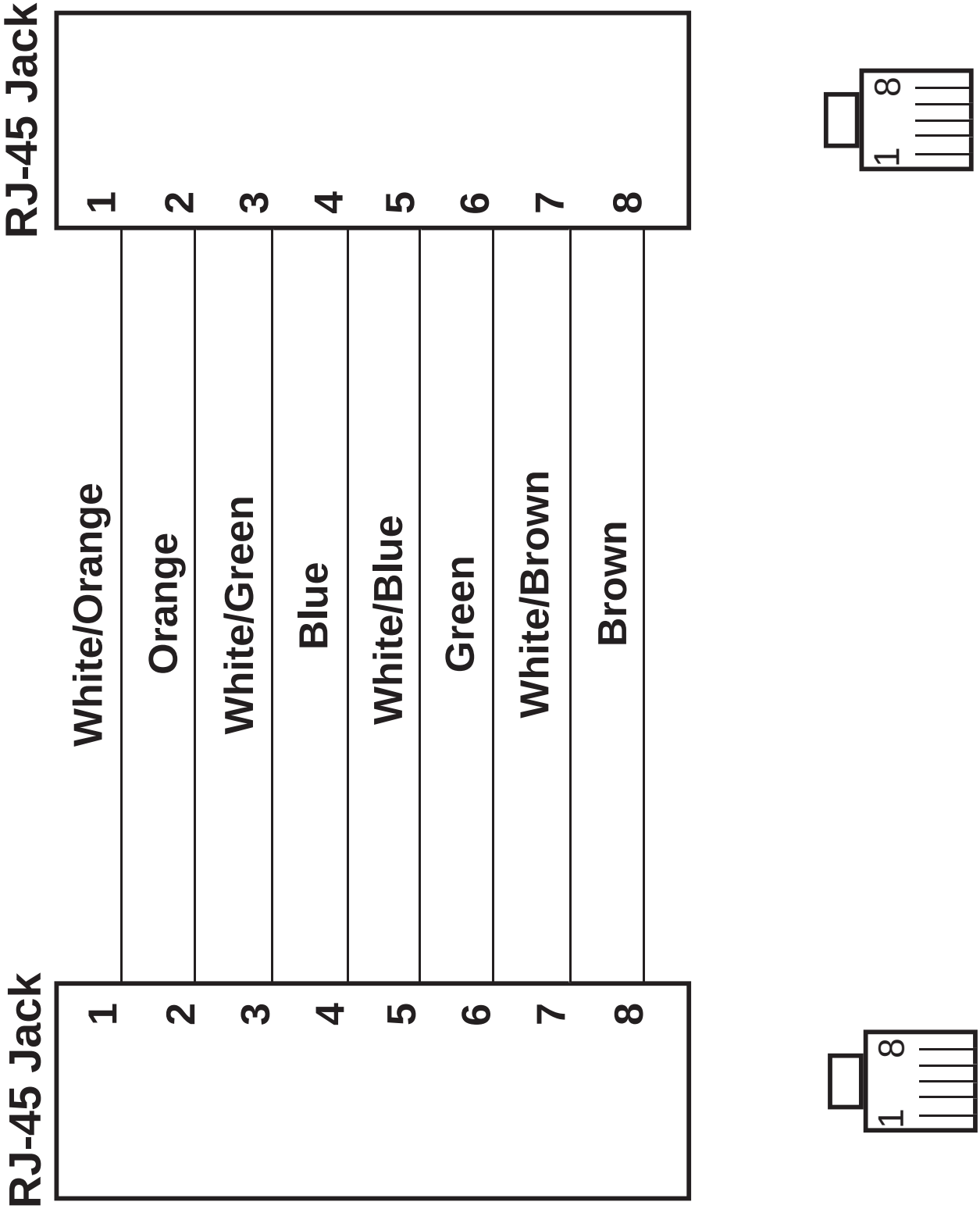
Adjustment Guidelines:

1) Strong boost should not be used on stranded cables. Strong boosting will cause pixels or no picture on these cables.

2) Using the wrong settings will not damage the units; it will either produce no image or a noisy image.

3) To eliminate the possibility of cross talk and interference, cables must be terminated with 568B scheduling. (See page 6 for details)

CAT5 LINK CABLE - WIRING DIAGRAM



Frequently Asked Questions

What kind of CAT-5e cable should I be using?
Solid core CAT-5e cable rated at 350 Mhz and terminated in 568a or 568b is the minimum requirement. For resolutions greater than 1280x1024 or 1080i, Gefen recommends solid CAT-6 cables.

I'm getting no video on the screens, what can I check?
First thing to check is make sure that the video CAT5 is linked to the other video CAT5 port and the same with the DDC ports. Try removing the power supply from the receiver side, if the power light turns off then you have your CAT-5 cables crossed. In some setups with grounding issues you will not get a picture with the receiver powered. Test to make sure the units are working with short CAT-5e cables 15-20 feet. You can also make sure you have the correct boost setting configured (refer to page 5).

Occasionally the picture blanks out, how do I fix this?
Flickering or a blinking image is the result of a loss of sync between the display and the source. Try lowering the resolution to see if that helps, if it does, the CAT-5 cables you are using are unable to handle the bandwidth of the higher resolution and thus you are losing sync. Try a shielded CAT-6 cable on the video line to reduce interference. You can also try adjusting the service switches. Usually this is caused by EMI and a shielded CAT-6 with metal RJ-45 connectors with the drain wire soldered to the connectors will resolve the issue. Please refer to the service switch guide on page 5 for the different combinations.

Why is there a green or pink tint to my picture?
A tint of green or pink in the picture is a result of incorrect colorspace being transmitted. This can be resolved by recycling power on your devices including the extender. If this does not help, the DDC data containing the colorspace is not being transmitted correctly due to loss in the CAT5 cable, try replacing the DDC cable.

TERMINOLOGY

CAT-5
Category 5 cable, commonly known as Cat 5, is an unshielded twisted pair type cable designed for high signal integrity. The actual standard defines specific electrical properties of the wire, but it is most commonly known as being rated for its Ethernet capability of 100 Mbit/s. Its specific standard designation is EIA/TIA-568. Cat 5 cable typically has three twists per inch of each twisted pair of 24 gauge copper wires within the cable.

CAT-5e
Similar to Cat 5 cable, but is enhanced to support speeds of up to 1000 megabits per second.

DDC
Short form for Display Data Channel. It is a VESA standard for communication between a monitor and a video adapter. Using DDC, a monitor can inform the video card about its properties, such as maximum resolution and color depth. The video card can then use this information to ensure that the user is presented with valid options for configuring the display.

DDWG
Digital Display Working Group DDWG are the creators of the DVI specification.

DVI
Digital Visual Interface. Connection standard developed by Intel for connecting computers to digital monitors such as flat panels and DLP projectors. A consumer electronics version, not necessarily compatible with the PC version, is used as a connection standard for HDTV tuners and displays. Transmits an uncompressed digital signal to the display. The latter version uses HDCP copy protection to prevent unauthorized copying.

HDCP
High-Bandwidth Digital Content Protection. Created by Intel, HDCP is used with HDTV signals over DVI and HDMI connections to prevent unauthorized duplication of copy written material.

HDTV
High-Definition Television. The high-resolution subset of our DTV system. The ATSC defines HDTV as a 16:9 image with twice the horizontal and vertical resolution of our existing system, accompanied by 5.1 channels of Dolby Digital audio. The CEA defines HDTV as an image with 720 progressive or 1080 interlaced active (top to bottom) scan lines. 1280:720p and 1920:1080i are typically accepted as high-definition scan rates.

VESA
Video Electronic Standards Association, a consortium of manufacturers formed to establish and maintain industry wide standards for video cards and monitors. VESA was instrumental in the introduction of the Super VGA and Extended VGA video graphics standards with a refresh rate of 70 Hz, minimizing flicker and helping to reduce user eyestrain and fatigue.

SPECIFICATIONS

Video Amplifier Bandwidth ..... 165 MHz

Input Video Signal ..... 1.2 volts p-p

Input DDC Signal ..... 5 volts p-p (TTL)

Single Link Range .....1080p / 1920 x 1200

DVI Connector Type ..... DVI-I 29 pin female (digital only)

Digital Audio Connectors.....S/PDIF and TOSLink

Analog Audio Connectors.....L+R Analog RCA

Link Connector RJ-45

Power Consumption ..... 20 watts (max)

Power Supply ..... 5V DC

Dimensions ..... 2.5” D x 5.5” W x 1” H

Shipping Weight ..... 4 lbs.

WARRANTY

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.

2. Customers outside the US are responsible for shipping charges to and from Gefen.

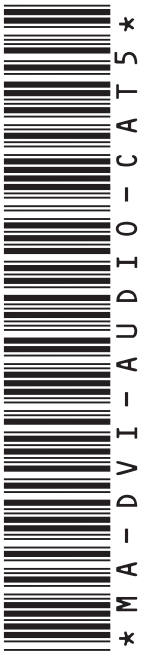
3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, please visit Gefen's Warranty web page at http://www.gefen.com/kvm/aboutus/warranty.jsp

PRODUCT REGISTRATION

Please register your product online by visiting Gefen's web site at http://www.gefen.com/kvm/Registry/Registration.jsp



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